Social Problem Solving Styles, Acting-out tendencies, and Aggression in Boys and Girls

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The present research studied gender differences in aggression, acting-out tendencies, and social problem solving styles in boys and girls. Sample comprised 150 children (75 boys and 75 girls; ages ranging from 9 to 12 years). The data was collected using Urdu-version of Social Problem Solving Measure (Mushtaq, 2007; Dodge, 1986) and The Hand Test (Wagner, 1983) from different schools of Rawalpindi and Islamabad. The results indicate significant mean differences between boys and girls on aggression, acting-out scores, and social problem solving styles ($p = .05$). Nonsignificant differences were obtained for social problem solving styles and aggression.

Keywords: Aggression, acting-out score, social problem solving styles

Aggression is defined as the behavior that is intended to cause harm to persons or property and that is not (socially) justifiable. The easiest definition to aggression was coined by Cavell (2000) by including all behaviors that are ‘intrusive’, ‘demanding’, and having an ‘aversive effect’ on the environment. Volavka (2002) defined aggression in terms of overt and/or covert behaviors that may cause destruction and mayhem.

The examination of children’s aggression has often divided aggressive behaviors into several set of categories as physical aggression, relational aggression, instrumental aggression, and affective aggression (Gunter, Harrison, & Wykes, 2003; Raney & Bryant, 2006; Underwood, 2003; Underwood, Hurley, Johanson, & Mosely, 1999). Most fact-finding researches that define the elements of aggression and aggressive behaviors have been conducted during the 1980s and early 1990s. For example Coie and Dodge (1988; Adam & Berzonzky, 2006) define aggression as “behavior that is aimed at
harming or injuring other person” (p.781). Lefrancois (1983) describes aggression as physical or verbal behavior intended to heart someone” (p.244). Numerous other psychologists like Feshbach et al. (as cited in Horne & Sayger, 1990) stress that aggression is always purposive; a kind of behavior that encompasses a hostile intent. Recent literature on related to aggression and conduct problems in children and early adolescents tend to focus on the impact disordered behavior has on the lives of the aggressive child and his environment (Adam & Berzonzyk, 2006; Mash & Barkely, 2007; Vasey, Dangleish, & Silverman, 2003). The ideology is to understand and predict effectiveness of preventive and management programs (and systems). For example research reported that aggression has been found to impair development of conscience and emotional bonding; as a consequence affecting the moral and social behavior of children (Cavell, 2000).

Gender differences in aggression are well documented and begin early (Eagly & Steffen, 1986). Aggression by girls remains primarily relational and is directed predominately toward other girls (Cairns, Cairns, Neckerman, Ferguson, & Gariepy, 1989; Galen & Underwood, 1997). Boys begin to display more aggression as preschoolers and continue to do so throughout the elementary-school years (Loebef & Hay, 1997). But beginning to preschool years and extending into adolescence, girls display more relational aggression than boys do (Crick, Bigbee, & Howes, 1996). There is evidence that boys are more likely than girls to display their frustrations; their frustrations are also more likely to be displayed overtly (Bjorkquist, Lagerspets, & Kaukiainen, 1992; Buss, 2005; Coie & Dodge, 1997; Maccoby & Jacklin 1974). Women tend to display indirect form of aggression. Davey (2006) classifies the feminine aggression to be centered around social manipulation of a person’s prestige and esteem. They tend to ‘gossip’ more and to talk about how inappropriate ones’ actions have been. Therefore women aggression may seem invisible on overt measures of aggression.

Earlier on, it was believed that the acting-out score successfully predicts acting out tendencies of an aggressive nature. The acting-out tendency was seen as a defense mechanism that was likely to reflect action tendencies that work insync with action tendencies that are readily activated and which are therefore likely to be apparent in overt behavior. The acting-out score was believed to identify overt aggression from covert aggression. Infact acting-out score was believed to be the ability of the hand test was to predict the tendency to act out in any aggressive manner (Bricklin, Piotrowski, & Wagner, 1962; Smith & Handler, 2006).
Social problem solving skills are a complex of behavior that is acted upon by children. Every child monitors his or her environment and makes internal assessments. The child appraises the situating for its suitability, makes a decision about its susceptibility to change and then decides upon course of action that promises maximum benefits and survival. All these skills are aligned with the feelings of the child (Marshall, Temple, Montes, & Russell, 1996; Mushtaq, 2007). This concept is an out-growth of the social information processing model. It assumes that the cognitive makeup of an individual plays a vital role in the overt behavior pattern. Calvete and Orue (2010) state that aggressive children experience barriers while interpreting the information they are faced with. The process is well recorded and may be outlined as: (a) the child attends to specific cues and reacts to perceived ‘hostile intent’, (b) perceives the actions of the other person as detrimental to one’s objectives, (c) develops hostile intent, (d) comes with covert or overt aggressive action tendencies, (e) feels reinforced by previous successful control of situation through aggression, and (f) act on the aggressive impulse. A child who holds distorted and unjustified schemas tend to have awry sequence of development. Literature related to relational aggression in children give high importance to the process of social information processing (Crick & Dodge, 1994). Aggressive children are less likely to display social problem solving skills as compared to non-aggressive children.

Mushtaq (2007) conducted a research on aggressive children’s status among peers and their social information processing. Result supported that aggressive rejected children displayed low social problem solving abilities as compared to non-aggressive popular children. Aggressive behavior is regarded as the inability of a child to understand the social norms and rules. These children tend to have a directional thinking that keeps them from being able to understand a social situation thoroughly (Cardwell, 2003).

Peer relations of aggressive children tend to be tainted by prejudice and power relations (e.g., Chung & Asher, 1996; Rose & Asher, 1999). Delveaux and Daniels (2000) examined the relationship between ‘goal selection’ and ‘relational aggression’. In their research they used hypothetical situation based scenarios to test how children would act in when dealing with conflict situation. The children’s selection were determined by their selfish needs of control, staying out of problems, avoid scolding, and settling personal vendetta along with maintenance of interpersonal relations. This was found to directly proportional to the child’s need for affiliation.

Researchers have established that children respond with aggressive tendencies (both overt and covert), when they have an idea
they can get away with the aversive act (Dodge, Pettit, McClaskey, & Brown, 1986). Research indicates that boys tend to go for acting-out acts of aggression because they seem to give quicker and surer results. They can then dominate any social situation effectively as compared to non-overt acts of aggression (Cuddy & Frame, 1991). Similarly, Crick and Werner (1998) investigated the determinants of response given by boys and girls who tend to act-out their aggression. They used the vignettes method, and made children respond to hypothetical social problem solving questions. But the only drawback is that traditional research using vignettes show that only overt aggression is screened out and not relational aggression.

The present research will study the relationship between aggression and social problem solving skills in children. Also this research should help in understanding how boys and girls differ with respect to aggression and its implications for social behavior. The hypotheses formulated for the study were:

Hypothesis 1: Boys will be more aggressive as compared to girls.

Hypothesis 2: Social problem solving styles differ significantly in boys and girls.

Hypothesis 3: There will be significant differences in acting-out scores of boys and girls.

Hypothesis 4: Aggressive children are less likely to display social problem solving skills as compared to non-aggressive children.

Method

Sample

The sample of study comprised of 75 boys and 75 girls. Their age ranges was from 9 to 12 years. The data was collected from different schools of Rawalpindi and Islamabad. Convenient sampling technique was used for data collection. The students studied in classes 4, 5, and 6.

Instruments

Social Problem Solving (SPS) Measure. Urdu-version of Social Problem Solving Measure was used to measure the social information processing patterns. This scale, originally developed by Dodge (1986), was adapted by Mushtaq (2007). It consists of eight
stories; for each story, subject generates six qualitative statements. The statements are then judged for their content. For the current research, two judges were used to assign each qualitative response to preset response categories.

The following categories were scored: *Aggressive responses*: In this category, those children are included that uses verbal attacks, threats, non physical aggression, non physical retaliation, negative bargaining, physical attacks on provocateur, forcibly removing the object from the provocateur’s possession, and aggression against an object; *Defensive responses*: In this category, child attempts to obtain the goal but the strategy is unlikely to succeed. e.g., no response, irrelevant response and ineffective responses; *Problem solving*: this represents children suggesting mutual activity or some of cooperation plays. *Enactment skills*: When an optimal response has been selected from picture, the child proceeds to act it out; *Authority intervention*: Child appeals to authority figure to intervene and punish the other child; and *Combination*: In this category those children are included that lie on more than one category at a time. The scales’ inter-rater reliability for Pakistani population was found to be .83 (Mushtaq, 2007).

**The Hand Test.** The Hand Test (Wagner, 1983) has been used for the identification of aggressive children. The hand test utilizes relatively structural stimuli (pictures of human hands) in relatively unstructured poses, permitting individual variation in responses. The test consists of ten cards. Nine cards depicting a pose of human hands; the tenth card is blank, inviting the respondent to use his/her imagination. The respondent has to report what each pose of the hand depicts. The researcher records the statements of the individual and records them according to pre-set criteria. In general 22 categories can be scored (for further discussion see Wagner, 1983).

Two scoring systems can be used. For qualitative scoring, the researcher uses the statements and verbatim responses of the individual per se. For quantitative scoring, the researcher calculates the frequencies of aggression responses reported by the respondent *acting-out score* (AOS; Wagner, 1983). For the present research, the researchers only utilized the frequency of aggressive responses. Test-retest reliability of The Hand Test using both normal and psychopathological groups indicates performance on the Hand Test to be stable across time (Wagner, 1983). The testing sessions over a two-week period yielded correlation from .51 to .89 for the quantitative scoring subcategories, .60 to .86 for the combine quantitative scores and .30 to .80 for the summary scores.
Procedure

The sample was collected from three schools of Rawalpindi and Islamabad. Permission was taken from the administration of the school. Teachers were asked to identify children between the ages of 9 and 12 years they believed displayed behavioral digression in their conduct: The Hand Test was then administered in classes, making sure that identified children were included in the sample. The Social Problem Solving Measure was administered individually during recess and games period.

Results

The hypotheses were tested using chi-square analyses and t-test analyses. Data was analyzed using statistical package for social sciences (SPSS).

Table 1 shows the frequencies and percentages of boys and girls on Social Problem Solving styles. Boys have relatively higher frequency on aggressive responses ($f = 25; 33.3\%$) and frequencies of girls are relatively highest for defensive styles ($f = 32, 25.3\%$). Authority intervention was the least favored skill in girls.

Table 1
Frequencies and Percentages of Boys and Girls on Different Categories of Social Problem Solving Styles (N=150)

<table>
<thead>
<tr>
<th>Social Problem Solving Styles</th>
<th>Boys</th>
<th>Girls</th>
</tr>
</thead>
<tbody>
<tr>
<td>f &amp; %</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Defensive</td>
<td>19</td>
<td>32</td>
</tr>
<tr>
<td>25.30</td>
<td>42.70</td>
<td></td>
</tr>
<tr>
<td>Aggressive</td>
<td>25</td>
<td>8</td>
</tr>
<tr>
<td>33.30</td>
<td>10.70</td>
<td></td>
</tr>
<tr>
<td>Active</td>
<td>6</td>
<td>17</td>
</tr>
<tr>
<td>8.00</td>
<td>22.70</td>
<td></td>
</tr>
<tr>
<td>Problem solving</td>
<td>7</td>
<td>6</td>
</tr>
<tr>
<td>9.33</td>
<td>8.00</td>
<td></td>
</tr>
<tr>
<td>Combination</td>
<td>18</td>
<td>10</td>
</tr>
<tr>
<td>24.00</td>
<td>13.30</td>
<td></td>
</tr>
<tr>
<td>Authority intervention</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>0.00</td>
<td>2.70</td>
<td></td>
</tr>
</tbody>
</table>

$= 48.93; df = 9; p < .00.$

Table 2 indicates that there are gender differences in frequencies of aggressive and non-aggression as calculated by the Hand Test. Boys showed relatively more tendency for aggressive behaviors than girls. The differences were found significant at .00 level of significance.
Table 2

*Frequencies and Percentages of Aggressive and Non-Aggressive Boys and Girls on Hand Test (N = 150)*

<table>
<thead>
<tr>
<th>Gender</th>
<th>Boys (n=75)</th>
<th></th>
<th>Girls (n=75)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Aggressive</td>
<td>Non-aggressive</td>
<td>Aggressive</td>
<td>Non-aggressive</td>
</tr>
<tr>
<td>f</td>
<td>%</td>
<td>f</td>
<td>%</td>
<td>f</td>
</tr>
<tr>
<td>38</td>
<td>50.7</td>
<td>37</td>
<td>49.3</td>
<td>28</td>
</tr>
</tbody>
</table>

$^2 = 150; df = 3; p < .00.$

Table 3 indicates mean differences for boys and girls children on acting-out scores on The Hand Test. The results indicate significant mean differences between boys and girls on aggression ($t = 2.69; df = 148; p < .00$). Boys displayed more acting-out tendencies than their counterparts.

Table 3

*Mean, Standard Deviation, and t-values of Acting-out Score (AOS) of Boys and Girls on the Hand Test (N = 150)*

<table>
<thead>
<tr>
<th>Gender</th>
<th>Boys (n=75)</th>
<th></th>
<th>Girls (n=75)</th>
<th></th>
<th>Cohen's d</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
<td>t(148)</td>
<td>p</td>
</tr>
<tr>
<td>AOS</td>
<td>.56</td>
<td>1.97</td>
<td>.51</td>
<td>2.8</td>
<td>2.69</td>
<td>.01</td>
</tr>
</tbody>
</table>

*Note. AOS = acting-out score; CI = Confidence Interval; LL = Lower Limit; UL = Upper Limit.*

Table 4 indicates that there are differences in frequencies of aggressive and non-aggressive children in styles of social problem solving skills. Social problem solving styles of the aggressive children differed significantly from the social problem solving styles of non-aggressive children.
Table 4

Frequencies and Percentages of Aggressive and Non-aggressive on Different Categories of Social Problem Solving Styles (N =150)

<table>
<thead>
<tr>
<th>Social Problem Solving Styles</th>
<th>Non-aggressive (n=84)</th>
<th>Aggressive (n=66)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Defensive</td>
<td>f 31</td>
<td>41.30</td>
</tr>
<tr>
<td>Aggressive</td>
<td>f 19</td>
<td>25.30</td>
</tr>
<tr>
<td>Active</td>
<td>f 10</td>
<td>25.30</td>
</tr>
<tr>
<td>Problem solving</td>
<td>f 5</td>
<td>6.60</td>
</tr>
<tr>
<td>Combination</td>
<td>f 17</td>
<td>22.60</td>
</tr>
<tr>
<td>Authority intervention</td>
<td>f 2</td>
<td>2.60</td>
</tr>
</tbody>
</table>

\[\chi^2 = 47.27; df = 10; p < .00.\]

Discussion

The present research aimed at investigating the gender differences in aggression and social information processing styles among school children. Another objective of the research was to find out whether there is any difference in aggressive and non-aggressive children on social problem solving styles. The sample of the study was taken from different schools of Rawalpindi and Islamabad. For this purpose an indigenously developed social problem solving measure was used to assess the social problem solving styles in children and for the identification of aggressive and non-aggressive children. The Hand Test was used. To assess the relative importance of these variables, two groups of aggressive and non-aggressive were extracted from a sample of children.

It was assumed that there will be significant differences in boys and girls in styles of social problem solving skills. Results prove that boys and girls are significantly different in social problem solving styles. Boys scored high in aggressive responses, and they do not score on authority intervention and girls scored high in defensive and girls scored low on aggressive responses. The findings of the present research are in consistent with the past researches as previous research has indicated that gender plays a significant role in social behaviors of young children as studies have shown that boys and girls do in fact approach problematic social situations differently (Cirino & Beck, 1991; Dodge & Feldman, 1990; Dorsch & Keans, 1994; Feldman & Dodge, 1987; Shaugnessy & Teglasi, 1989; Walker, Irving, &
Berthelsen, 2002). Little girls are reported to have social interaction patterns that are based on minimizing interpersonal conflict, making sure that the interaction does not cause permanent damage in relations; they just wish to win the argument, causing a situation superiority to emerge (Dodge & Feldman, 1990). The prime reason is that girls interpret abrasive actions as a permanent end to interpersonal relations (Musun-Miller, 1993; Underwood et al., 1999).

The social information processing model of aggression given by Dodge (1980) and elaborated by Crick and Dodge (1994) states that every aggressive act is part of a complex chain of information processing steps. The perceptions and past experiences of each individual help him or her to interpret every existing situation in a certain manner (Lochman & Dodge, 1994). Negative social behavior as aggression is thought to be the result of cognitive deficits at one or more of these stages (Aydin & Markova, 1979; Dodge & Frame, 1982; Lochman, 1987).

Girls scored high on active, inept, and irrelevant styles of social problem solving styles and they scored low on aggressive responses. It means that boys do not like to share their feelings mostly to their elder one. They like to take matters in their hand and prone to use physical aggression or threats. They try to solve their problem themselves. As we examine in our daily life, it is obvious that boys are not more willing to share their feelings to elder as compare to girls as they like to share their feelings to other more as compared to boys. They feel more comfortable to share their feelings to their friends and their age fellows as compared to their age fellows.

It was hypothesized that those boys will interpret the gesture of the hand test more aggressively as compared to girls. Results showed that boys display more aggression as compared to girls. Researches have supported that there is a large difference in the number of boys and girls who engage in violent behavior during adolescent. This sex difference of rate of aggression begins long before adolescence and is observed in all cultures of the world. Boys begin to display more physical and verbal aggression as preschoolers and continue to do so throughout the elementary-school years (Loeber & Hay, 1997). Gender differences in aggression are well documented and begin at very early stage of life (Eagly & Steffen, 1986). Boys are more aggressive than girls (Buss, 2005; Coie & Dodge, 1997) there is evidence that boys are quicker to aggression and more likely than girls to express their aggression physically.

In Pakistani context, girls remain submissive; they repress their feelings of anger and mostly do not openly express their feelings as
compared to boys (Munir, 2002). Aggression by girls remains primarily relational and is directed predominately toward other girls (Cairns et al., 1989; Galen & Underwood, 1997). Family plays an important role in the development of aggression in children. Boys learned to express their aggressive behavior through imitating the behaviors of model (Bandura, 1973). Family environment or cognitive attribution also plays their role as etiological factors in the development of aggressive behavior in boys.

Aggressive children are less in patience and tolerance and more quicker in displaying their aggression. In Pakistani context, people are mostly in high extreme either in expressing emotion or in repressing their feelings. If someone is depressed, there are more chances of a person to develop the disorder and if the person is more in expressing their emotion, there are more chances of people to develop oppositional disorder or conduct disorder (Jacobson, 2004).

It was assumed that aggressive children show more social problem responses as compared to non-aggressive children. Results do not support the hypothesis. Results prove that non-aggressive children score more on defensive, aggressive and authority intervention responses than aggressive children. The present research extended this line of inquiry by investigating the association of aggression and social information processing styles. The social information processing model has established a very direct relation between faulty processing of information by aggressive children and their negative behaviors. Cognitive distortions seem to mark their abilities to understand and interpret social situations in adaptive and positive manner. It may be due to lack of awareness and knowledge of and they do not report accurately. They mostly show defensive attitude.

The present study adds important findings to a growing literature on the social information processing styles among children with two social statuses as aggressive and non-aggressive. To sum up the above discussion on the findings that boys and girl were found to have relatively significant differences in methods of social problem solving. The results indicate that boys displayed more aggressive behavior as compared to girls. Aggressive children show more social problem solving skills as compared to non-aggressive children. The findings of the present research indicate that future research can look into the phenomena of aggressive in relation with cognitive schemas and gender roles. Innovative and qualitative research methods can help in understanding of children’s cognitive schemas. Such researches can help in application of such research findings in dealing with problematic behaviors of school children specifically and children at large.
References


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